

MARINE RECREATIONAL INFORMATION PROGRAM

FY Project Plan

Survey of Recreational Boat Fishers in the US Virgin Islands

Created on

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1. Overview

1.1. Background

Saltwater recreational fishing is one of the most important outdoors activities in the U.S. Virgin Islands (USVI) (CFMC 1985; Griffith et al. 1988; Hinkey et al. 1994; Friedlander and Contillo 1994; Adams 1996; Friedlander 1995). Telephone surveys conducted by Jennings (1992), Eastern Caribbean Center (2002) and Mateo (2004) indicate that as much as 10% of the population participates in recreational fishing. Besides personal enjoyment and providing an important source of household dietary protein, recreational fishing activities also contribute significantly to the Virgin Islands economy. Hinkey et al. (1994) estimated that more than \$25 million dollars were spent on activities associated with recreational fishing, primarily during the seasonal blue marlin fishery.

Several categories of recreational fishing have been identified, charter boat, private boat (both inshore and offshore) and shore and pier (Jennings 1992; Mateo 2004). The recreational line fishery targets offshore, inshore and reef fish fisheries, as well as invertebrates (Adams 1996; Mateo et al. 2000; Toller et al. 2005). Large pelagic gamefish are seasonally abundant in offshore waters (Brandon 1989; Tobias 1994; Adams 1995) and shallow water gamefish abound in inshore waters. By censusing individuals from a recreational boaters registration list, Tobias and Dupigny (2009) determined that 38% of the U.S. Virgin Islands recreational powerboat owners with vessels greater than 16 feet fish recreationally for marlin and pelagic fish species. Although separated by a distance of only 40 miles, significant differences exist between the recreational fisheries of St. Croix and the three major northern Virgin Islands, St. Thomas, St. John and Water Island. These differences include island topography, bathymetry of adjacent waters, size of coastal platform, fishing methods, resources and resource users (Griffith et al. 1988; Brandon 1989; Hinkey et al. 1994; Friedlander and Contillo 1994; Tobias 1994; Adams 1995; Friedlander 1995; Garcia-Moliner et al. 2002).

The USVI developed a recreational fisheries port sampling program in 1981 and has used various methods, including telephone surveys, socio-economic surveys, logbooks, shoreline roving creel surveys, dockside interviews and fishing tournaments, to collect data on recreational fishing activities (Tobias 1985 and 1991; Brandon 1989; Jennings 1992; Adams 1995; Adams et al. 1996; Mateo 2004; Toller et al. 2005). However, a continuous, statistically valid survey methodology and resulting long-term recreation dataset is lacking. Early federal attempts by the National Marine Fisheries Service (NMFS) to collect catch and effort data through the Marine Recreation Fisheries Statistics Survey (MRFSS) from 1979 to 1981 and from 1999 to 2001 in St. Thomas were unsuccessful due to lack of funding and difficulty to recruit, hire and retain field interviewers (Munoz et al. 2013). Presently, the redirection of territorial program funding and reduction of staff have limited USVI recreational fisheries data collection to recreational fishing tournaments only (Toller et al. 2005), the majority of which are for coastal pelagic or pelagic fish species. Data on recreational landings of federally-managed resources, such as shallow water reef fish, is sparse

and non-existent for lobster, conch and deep water snappers.

Federal mandates, as a result of the Magnuson-Stevens Fisheries Conservation and Management Reauthorization Act of 2007, required management plans for resources in federal waters of the Exclusive Economic Zone to eliminate overfishing by 2010 and all other managed stocks by 2011. Annual catch limits (ACLs) and accountability measures (AMs) are required for all managed species that comprise the commercial and recreational fishery. In order to establish viable ACLs that are equitable and fair to all U.S Caribbean user groups, it is essential to know the amount of harvest of the managed resources by recreational fishers. Although a draft USVI recreational fisher license program and recreational fishing regulations were developed by the St. Croix and St. Thomas/St. John Fisheries Advisory Committees (Tobias 2010), the program has not received government sanction. At the present time, USVI ACLs have been established for federally-managed species of the commercial fishery only.

The NMFS has recognized the need to collect statistically valid, long-term recreational fisheries data in the USVI. To this extent, the NMFS Marine Recreational Information Program (MRIP) funded workshops in the US Caribbean to review the current MRIP program in Puerto Rico and to look at the potential of establishing MRIP in the USVI (Kojis and Tobias, 2012). Data needs and recommendations for collecting recreational fisheries data were identified in a report completed by MRIP consultants (Munoz et al. 2013). This proposal concentrates on a priority recommendation by Munoz et al. (2013) to use the annual vessel registration list maintained by the Government of the USVI, Division of Environmental Enforcement, as a frame to characterize boat based recreational fishing, design a questionnaire to collect basic recreational fishing effort information and conduct a pilot survey (via mail, telephone, a combination of the two or other method) of recreational fishers using vessels. The overall goal of MRIP in the USVI is to obtain catch and effort information on the removal of all marine resources (finfish, conch, lobster, whelk and other invertebrates) by recreational fishers by species and district (St. Thomas/St. John and St. Croix Districts).

1.2. Project Description

This proposal describes the first year of what will become a multi-year effort to establish baseline data on the recreational fishery in the USVI. The initial study will characterize the boat-based recreational fishery of the U.S. Virgin Islands by utilizing the boater registration lists maintained by the Government of the Virgin Islands, Department of Planning and Natural Resources (DPNR), Division of Environmental Enforcement (DEE) to conduct a pilot survey of registered boat owners. The survey design will be developed with input from stakeholders and expert consultants. A pilot study will be conducted to compare the performance of mail and telephone survey methods. It is anticipated that the outcomes from the sampling methodology tested in this pilot study will be analyzed, and the method refined as necessary, to form the standard for surveying boat-based recreational fishers in the U.S. Virgin Islands.

1.3. Objectives

The object of this project is to determine if the frame for surveys of recreational boat-based fishers can be derived from the U.S. Virgin Islands vessel registration database. A pilot survey will be conducted to characterize the recreational fishery of the St. Croix and St. Thomas/St. John Districts separately in terms of the proportion of vessels participating in recreational fishing in various categories (commercial, private, charter, etc.), landing sites used by recreational fishers, the temporal distribution of fishing, etc. The survey will be designed with input from stakeholders and expert consultants. The pilot survey will also compare response rates of different data collection modes (telephone, mail and combination of telephone and mail) for the USVI Boat-Based Recreational Fishery.

1.4. References

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2. Methodology

2.1. Methodology

U.S. Virgin Islands Recreational Boat-based Recreational Fishing Survey using the USVI vessel registration lists for St. Thomas/St. John and St. Croix District

A survey of recreational boaters will be conducted to characterize the boat-based recreational fishery in the USVI and to compare the response rate of three modes of data collection: mail only, phone only and mixed mode method (phone and mail) for each sector of the boat-based fishing fleet.

Task 1. Obtain/Proof Vessel Registration Database

The DPNR-DEE conducts vessel registration annually in the Virgin Islands. A total of 6,794 vessels were registered in 2011 (Acting Director Howard Forbes, pers. com.) of which approximately 6,500 vessels may be used for recreational fishing. DEE enters the registration information in an Access database, which will be used to conduct a survey of boat-based recreational fishers. The database will be converted to Excel format and quality assurance and quality control checks conducted for errors and completeness. The federal Highly Migratory Species and Angler Registry databases for the USVI will be accessed and registrants compared to the USVI vessel registration list. Any boats/names on the federal list which are not on the USVI list will be added to the list of boaters to be surveyed.

Task 2. Develop Survey Instrument

A survey instrument to characterize the USVI boat-based recreational fishery will be developed in consultation with stakeholders and MRIP consultants. The survey instrument will be tested on volunteer recreational boat-based fishers.

Task 3. Conduct Pilot Survey

MRIP consultant assistance will be utilized to identify statistically valid recreational boat-based fishery sector sample sizes and compare mail vs telephone survey protocols. Telephone interviewers will be trained and a pilot survey conducted to compare response rates of mail vs telephone data collection modes.

2.2. Regions

2.3. Geographic Coverage

St. Thomas, St. John, and St. Croix, US Virgin Islands

2.4. Temporal Coverage

One year - estimated - July 1 2013 - June 30, 2014 - depends upon the availability of funding.

2.5. Frequency

Varies depending upon final design.

2.6. Unit of Analysis

Per private boat-based recreational fishing trip

2.7. Collection Mode

Telephone interview and mailed questionnaire.

3. Communications Plan

3.1. Internal

Regular email and telephone communications will be used extensively to ensure liaison among team members. The lead members on St. Croix and St. Thomas will make periodic trips to St. Thomas and St. Croix, respectively, to meet and discuss the project, meet with the PI as necessary, and go on field site visits.

Either direct email or DropBox will be used to share documents.

3.2. External

Email and telephone will also be used to communicate with MRIP OT. Monthly reports will be submitted using the Monthly Report Template on the MDMS website and a final detailed report will be produced.

4. Assumptions and Constraints

4.1. New Data

Yes

4.2. Track Costs

4.3. Funding Vehicle

David Donaldson, Gulf States Marine Fisheries Commission

4.4. Data Resources

Federal Recreational and HMS Angler Registries.

4.5. Other Resources

US Virgin Islands Vessel Registration Database available from the VI Government, Department of Planning and Natural Resources, Division of Enforcement through the Division of Fish and Wildlife.

4.6. Regulations

No regulations constrain these surveys.

4.7. Other

This project hinges on the US Virgin Islands Vessel Registration Database. If the database is incomplete or not up to date, it may be necessary for the project leaders to arrange to have the database updated.

5. Risk

5.1. Project Risk

Table 1: Project Risk

Risk Description	Risk Impact	Risk Probability	Risk Mitigation Approach
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6. Final Deliverables

6.1. Additional Reports

Final Report

6.2. New Data Sets

An MS Excel database showing the stratification of vessels, results of interviews and metadata.

6.3. New Systems

7. Project Leadership

7.1. Project Leader and Members

Table 2: Project Members

Project Role	Name	Organization	Title
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8. Project Estimates

8.1. Project Schedule

Table 3: Project Schedule - Major Tasks and Milestones

#	Schedule Description	Planned Start	Planned Finish	Prerequisites	Milestones
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8.2. Cost Estimates

Table 4: Cost Estimates

Project Need	Cost Description	Date Needed	Estimated Cost
TOTAL			\$0.00